

REMARKS

Claims 1-13 are all the claims pending in the application. Claims 1 and 6 are amended to more fully define the invention.

Claims 1-10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ohi et al. (U.S. 5,798,589 [hereinafter "Ohi"]) and further in view of Hirano et al. (U.S. 6,333,579 [hereinafter "Hirano"]) and Kawanishi (U.S. 5,886,438 [hereinafter "Kawanishi"]).

Applicants submit that amended claims 1 and 6 are patentably distinct over the references, individually or in combination.

The present claims have a positional regulation part located on one side of said stator and a support portion located on the other side of the stator. The positional regulation part is integrally formed with the resin coil bobbins. The positional regulation part and the support portion regulate the position of the rotor both in the thrust and radial direction. Thus, on both sides of the stator, position of the rotor is regulated both in the radial and the thrust direction. These regulations are performed with the resin coil bobbins, so that the positional relationship of the stator and the rotor can be precisely regulated.

Ohi does not teach or suggest performing the regulation with the resin coil bobbin. The Examiner assumes that the members 38, 40, 15 and 13 correspond to the coil bobbins of the present invention. *See O.A., page 3.* These are, however, coil 38, coil windings 40, lower bearing holder 15 and through hole 13. *See Fig. 1; Col. 5, lines 20-35.* Thus, these are not the coil bobbins as claimed.

The upper insulating cover 36 and the lower insulating cover 37 of Ohi may correspond to the coil bobbins of the invention. See Fig. 1. However, between the upper and lower insulating covers 36 and 37, there are provided bearing holders 14 and 15 with specific shape so as to hold the bearings 16 and 17.

Thus, Ohi teaches that the bearings 16 and 17 are held by the bearing holders 14 and 15, not by the coil bobbins as claimed in the present invention. Ohi does not teach or suggest regulations performed with the resin coil bobbins.

Kawanishi fails to disclose a positional regulation part which regulates portion of the rotor both in radial and thrust direction at an end of the shaft. Kawanishi regulates the position of the rotor at the tip end of the shaft. A thrust spring 5 suppresses any play of the motor shaft 1 along the thrust direction. In such the structure, positional errors of the motor holder 2 can be amplified in radial direction.

Finally, the Examiner does not rely on Hirano for the features discussed above, and Applicants submit that Hirano does not make up for the deficiencies of Ohi and Kawanishi.

Since the references do not teach or suggest the above discussed features, Applicants submit that amended claims 1 and 6 are patentable over the references, alone or in combination.

Further, since claims 2-5 and 7-10 depend on claim 1 and 6, respectively, Applicants submit that they are patentable at least by virtue of their dependency.

Amendment Under 37 C.F.R. § 1.116
U.S. Appl. No.: 09/987,086


Attorney Docket No.: Q67205

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

The claims are amended as follows:

1. (*Amended*) A motor comprising:

a stator provided with a resin coil bobbin formed by insert molding having at least two metallic stator cores, said cores being stacked in an axial direction of the motor, and each core having an outer yoke and an inner yoke; and

a rotor accommodated in said stator, said rotor being rotated while being urged by an urging member in the axial direction of said rotor;

wherein a positional regulation part, [for regulating the position of said rotor in a thrust direction is integrally provided in said coil bobbin]located on one side of said stator, is integrally formed with said resin coil bobbins, and

wherein a support portion, located on the other side of the stator, supports a slide bearing,
and

wherein the positional regulation part and the support portion regulate the position of the rotor both in the thrust and radial direction.

6. (*Amended*) A motor comprising:

a stator provided with a resin coil bobbin formed by insert molding having at least two metallic stator cores, each core having an outer yoke and an inner yoke; and

a rotor accommodated in said stator, said rotor being rotated while being urged by an urging member in the axial direction of said rotor, said rotor being disposed inside said at least two cores;

wherein a positional regulation part, [for regulating the position of said rotor in a thrust direction is integrally provided in said coil bobbin]located on one side of said stator, is integrally formed with said resin coil bobbins, and

wherein a support portion, located on the other side of the stator, supports a slide bearing,
and

wherein the positional regulation part and the support portion regulate the position of the rotor both in the thrust and radial direction.